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Learning Statistics at a Distance

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Abstract

There is evidence from many leading statistics educators that students often find statistics a difficult subject to learn. This is often attributed to the abstract nature of the concepts and the change in thinking required to understand the theory of probability and the innate variation existing around us. For mature-aged students, these difficulties may be compounded by lack of basic mathematical skills and anxiety about learning statistics. In addition, learning at a distance may increase the problems students have in obtaining good understanding of the concepts.

The purposes of this qualitative study were to determine the value mature-aged students placed on having a compulsory statistics paper in their business or applied science degree; and to record the difficulties that these students attributed to their choice of the distance mode of learning and their strategies or suggestions for dealing with these. Recommendations for the design of distance courses for mature-aged students were discussed.

The main findings were:

- The lack of mathematical skills was the main reason that students were tentative about tackling a statistics course. Older students and those with little secondary education may be particularly affected.
- Anxiety was not as extensive as had been reported in overseas studies but is still an issue for statistics educators.
- Almost all students saw value in having a compulsory statistics course in their degree and were aware of the need to interpret data presented to them in their study, work or everyday life.
- The mature-aged students demonstrated good metacognitive skills and other learning strategies. Determination to succeed and high motivation were apparent, although many students found the course unexpectedly difficult.
- There was a variety of opinions about the effectiveness of available resources. Support mechanisms were deemed important, as was some face-to-face component in the statistics course and some flexibility in time-frames.

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